



ARTISTIC WAVES: HOW EFFECTIVE IS ART AS A MEDIUM FOR CREATING AWARENESS ABOUT OCEAN POLLUTION?

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ABSTRACT

This study delves into the effectiveness of using art as a medium for promoting awareness about ocean pollution. Through a comprehensive review of existing literature and original survey data collected in New Delhi, the research highlights the critical gap in public knowledge regarding artists and artworks focused on addressing ocean pollution. Despite widespread concern about the harmful impacts of ocean pollution, the survey findings reveal a striking lack of awareness among respondents regarding the role of art in conveying this message. This underscores the need to explore and amplify the potential of artistic interventions in environmental advocacy. Furthermore, by examining case studies such as “Bristol Whales” and “Bridge,” which employ recycled materials sourced from the ocean to create compelling narratives, the study illuminates the transformative power of art in building emotional connections and deepening the understanding of complex environmental issues, in this case, ocean pollution. In advocating for increased collaboration between artists, scientists, and policymakers, the research underscores the urgency of leveraging art’s communicative prowess to inspire collective action and preserve the fragile ecosystems of our oceans. This study serves as a call to action for harnessing art as a tool for environmental awareness and advocacy in the ongoing fight against ocean pollution.

KEYWORDS: Art, Environmental Issues, Ocean Pollution, Plastic Waste, Awareness.

INTRODUCTION

Every day, industrialization, globalization, and overpopulation create increased demand for materials and space. This creates problems such as global climate change, the production of excess waste material, pollution, and threats to wildlife (Derraik, 2002). In turn, a major threat is being posed to marine habitats and species due to debris from plastic, fishing nets, and oil spills. and the dumping of excess waste in the oceans. As seen through worldwide statistics, 32% of plastic is leaked out into the environment as litter or debris (Owens et al., 2021), of which 80% ends up as marine debris (IUCN, Issues Brief). This threatens not only all marine life but humans as well, through food quality and coastal tourism (IUCN, Issues Brief).

The threat of this debris to the marine environment has been overlooked for a long time, and its seriousness has only recently been recognized (Stefatos et al., 1999). There are numerous research papers, articles, social media accounts, magazine articles, and blog posts explaining the dangers and threats to our oceans. This has reached 98.9% of people living in Delhi, India, across different age groups, as seen in the 52 responses in an online survey. Results from another survey (Duarte et al., 2014) suggest that the public is highly concerned about ocean pollution, overfishing, and ocean acidification. By creating a greater extent of public awareness, scientists and funders can decipher how the larger population relates to marine environments and, as a result, align policies to fix the issue with public demand (Duarte et al., 2014).

While scientists are searching for better ways to reverse and

reduce climate change, artists and designers are seeking to reuse waste material, and while doing so, they look at continuing to raise awareness about these materials landing up in the oceans (Michałowska et al., 2021). In the online survey conducted, 0% of the people had information about artworks and artists that were creating awareness of the issue. While artists can communicate with large audiences and use their work as protest pieces and propaganda, the online survey disagrees with the statement about the specific issue surrounding ocean pollution (David et al., 2012). Ocean pollution, mainly from plastic waste, threatens marine life and human health. Art can play a vital role in raising awareness and inspiring action to combat this issue, especially in places like India where its potential remains largely untapped.

LITERATURE REVIEW

A summary article by David et al. (2012) found that modern artists and scientists rarely combine the two fields to communicate issues and educate people. To explore the responses of scientists to using the arts to expand audiences for ecological science, David performed a series of constructed examples for delegates over five days at an annual conference. A questionnaire held 500 delegates and 239 respondents and was observed that mediums of the arts, such as installations, caused positive outcomes in viewers. The literature reveals the dramatic role of the arts in communicating issues, influencing and educating people, and challenging dominant paradigms.

The research article by Czar et al. (2014) gives specifics on the plastic found in the open ocean as well as the impacts on

it. It shows that at 1000 g km⁻², “plastic concentration in the South Atlantic Ocean is the highest in the world.” Following this, the second highest plastic concentration in the oceans, 33-35% was found to be in the North Atlantic Ocean. The paper explains the abundance of plastic in the ocean which is then found in marine organisms of all different shapes and sizes because they mistake the plastic for smaller fish and consume it. After collecting 3070 samples from 5 different zones around the world and other available research, it was found that 7000-35,000 tons of plastic float on the open ocean surface. The main question asked by Czar et al. (2014) was how floating plastic is being removed through the identification of existing sinks. To this, 4 major sinks were proposed – shore deposition, nano-fragmentation, biofouling, and ingestion.

Another study done by Stefan et al. (2014) focuses on the source of awareness about marine impacts, particularly those related to climate change. This was done through the conduction of a 10,106-person pan-European survey which showed that the level of concern regarding marine impacts is closely associated with the level of information given. Results showed that European citizens primarily rely on television (82%) and the Internet (61%) as sources of information about marine impacts, particularly those related to climate change. There were no organizations included in the survey that included artists or galleries that promoted artworks of ocean pollution. The main cause of concern for European citizens was ocean pollution caused by plastic in the ocean, as well as other factors such as habitat destruction and ocean acidification.

In a research paper by Michalowska (2021), the importance of using art to make a significant commentary about the future of the Earth has been discussed. The paper focuses on plastic being used as a material in artworks and the shift into using waste plastic rather than fresh plastic in the 21st century. The objective of the study is to identify artistic strategies to generate awareness about pollution by analyzing the intentions of the artist and the theoretical and social contexts of their works. The other objective is to familiarize audiences with the achievements of contemporary artists in relation to natural sciences. The paper gives reference to artworks such as “Hells Angel,” “Human-Free Earth,” and “Bounty, Pilfered.” These help bring awareness to the issue of ocean pollution by reusing material found in the ocean.

METHODS

In order to assess the public’s perceptions with regard to art effectively creating awareness, a survey was administered across 60 people living primarily in New Delhi, India, out of which 52 responded. The survey was carried out online and sent to people of all ages via invitation emails. The reason the survey was conducted amongst people of all ages was to understand the overall information that society has about ocean pollution and whether they are aware of artists who express the same issue through art. The survey was designed to understand the extent of knowledge people have about ocean pollution and the overall effects of it. The survey included a mix of a 5-point scale with anchor points (1) “not concerned at all” to (5) “very concerned.” There were short answer questions as well, which

allowed participants to give their own opinions on the questions asked, thus minimizing bias in the survey. The third type of question, which were MCQs, consisted of 3 main answers – “Yes”, “Not really”, and “No” to get an overall understanding of individuals’ knowledge of the topic. The main aim of the survey was to understand the extent of peoples’ knowledge on artists and artworks that are spreading awareness about ocean pollution. Furthermore, except for this survey conducted, all research was based on secondary data collected from sites such as Elicit, Google Scholar, and J Store. This helped ensure that all the information was reliable and could be trusted.

RESULTS & DISCUSSION

“The oceans have become one giant refuse bin for all manner of plastics” (Wabnitz et al., n.d.). The reason that plastic is the main polluter of the ocean is because it is inexpensive, lightweight, strong, durable, and resistant to wear and tear. These versatile properties have changed our lives, and while they have contributed to our health and safety, they are non-biodegradable thus having extreme effects on our environment (Hopewell et al., 2009). The most pressing example of the extent of ocean pollution caused by plastic can be seen in patches like the Great Pacific Garbage Patch, which is estimated to be 1.6 million square kilometers. Recent surveys and expeditions found that 70% of plastic is at the bottom of the ocean, which means that only 30% of the plastic forms these 5-7 great garbage patches that have been found in all the oceans. Experts estimate that 5.25 trillion plastic particles, weighing in at nearly 269,000 tons, are floating in the world’s oceans (Wendel, 2014).

Through abrasion, plastics break into smaller and smaller pieces so “that they can be consumed by the smallest marine life at the base of the food web,” according to a report by the United Nations Environment Programme (UNEP 2009). Plastics turn up in bird nests, are worn by hermit crabs instead of shells, and are present in sea turtle, whale, and albatross stomachs (Mrosovsky et al., 2009). Mammals have been reported to ingest or become entangled in plastic debris, resulting in impaired movement and feeding, reduced reproductive output, and frequent death (Derraik, 2002; Laist, 1997). Plastic found in the stomachs of sea birds has drastically increased since the 1980s, as have microscopic fragments in species such as zooplankton.

The effects of plastic in the ocean aren’t merely limited to ingestion. It impacts the ocean wildlife in many other ways, such as entanglement. Fifty turtles (23 out of 38 juvenile greens, one out of 10 adult loggerheads, and one out of two adult leatherbacks) out of the 92 turtles found dead and stranded on the shorelines of Rio Grande do Sul State, Brazil, had ingested a considerable amount of debris floating in the ocean. This was the data for merely one year. Most of this debris consisted of plastic bags and ropes, causing severe lesions and/or obstruction of the digestive tract, linked to the deaths of four green turtles (Bugoni et al., 2001). The survey conducted shows that 95% of the responses are “killing marine life” or “harming the ocean animals,” indicating that the majority of the survey population is aware of the dire consequences plastic has on marine life. However, the lack of a suitable alternative restricts them from

completely cutting plastic out of their daily lives. 61.5% of the 52 individuals were aware of the plastic ban in the area, and while this is more than 50%, it is still not enough to completely cut out the use of plastic from daily use. This also goes to show that plastic bans in the area haven't been completely successful due to the information not reaching almost everyone.

In the survey, 0% of respondents had received any awareness through art about ocean pollution. All answers to the question "Is there any artist you have heard of who is spreading awareness of this problem through art?", were simply "No". Coastal public art is an up-and-coming medium to spread awareness about art, especially in areas like Chicago (Decker, 2007). This may mean that spreading awareness through art has not yet started in India, especially not in the bigger cities. Spreading awareness of a relatively newer topic, such as ocean pollution, is not as prominent yet but has started to slowly gain attraction and relevance over the last 10 years (Lee, 2021).

The reason art is important to spread awareness about such a sensitive and rapidly growing issue is that art provides a personal connection to communication through sensory and conceptual means, which makes it easier for individuals to connect with it and understand it better. Kagan (2014) states that "art connects people on an emotional level and, as a result, is a very fitting way to bring attention to critical issues" (Keunhye Lee 2021). Artists use environmental art to raise awareness about a wide range of environmental issues. They do this by creating thought-provoking installations, sculptures, and performances that are designed to capture the attention and imagination of viewers.

One common approach is to create works that draw attention to specific environmental issues, such as pollution or deforestation. For example, an artist might create a sculpture made entirely out of plastic waste to highlight the problem of plastic pollution in our oceans. This is seen in artworks like "Bristol Whales" by Sue Lipscombe, "Bridge," and "Ocean of Plastic" by Dianna Cohen, which uses plastic and debris from the ocean, which further aids in creating awareness about the said issue. "Bristol Whales" was a temporary artwork initiated by Artists Project Earth that depicted two life-size whales swimming through an ocean of 70,000 empty plastic bottles. These were collected from marathons and aimed to represent the beauty of our oceans, which are now threatened by the production and use of excessive plastic. Furthermore, "Bridge" and "Ocean of Plastic" by Dianna Cohen were created using recycled plastic bags to raise awareness of ocean waste and plastic pollution, especially non-biodegradable plastics (Cohen, 2013). While a few exhibitions recently have done similar projects using ocean debris in India, it will still take time to rise to a higher level and receive more attention and appreciation, which is why the results of the survey were as stated before.

CONCLUSION

In summary, this study has explored the effectiveness of utilizing art as a medium for raising awareness about ocean pollution. Through an examination of existing literature and original survey data, the research has revealed a significant gap

in public knowledge regarding artists and artworks focused on addressing this critical environmental issue. Despite widespread concern about ocean pollution, there remains a striking lack of awareness among respondents regarding the role of art in conveying this message.

However, the study also highlights the transformative power of art in building emotional connections and deepening understanding. Case studies such as "Bristol Whales" and "Bridge" demonstrate how recycled materials sourced from the ocean can be used to create compelling narratives that inspire action and advocacy. By fostering interdisciplinary collaboration between artists, scientists, and policymakers, art has the potential to mobilize communities and drive meaningful change in the fight against ocean pollution.

As a call to action, it is imperative that we harness the communicative prowess of art to its fullest extent. This requires increased collaboration between artists, scientists, and policymakers to amplify artistic interventions and promote environmental awareness. Moreover, as individuals, we must actively seek out and support initiatives that utilize art as a tool for advocacy and education. By incorporating sustainable practices into our daily lives and advocating for policy reforms, we can collectively work towards preserving the health and integrity of our oceans for future generations. Through collaboration and advocacy, we can harness art's transformative power to raise awareness, inspire change, and protect our oceans for generations to come.

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